	Application No.	Applicant(s)
Notice of Allowability	09/695,059	THOMAS, CHRISTOPHER K.
	Examiner	**Art Unit**	
	James Alpert	3693	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *8/3/2006*.

2. ☒ The allowed claim(s) is/are *1-7 and 21*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☒ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☒ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/03/2006 has been entered.

Status of Claims

In the final Office Action, mailed 02/09/2006, Claims 1-21 were rejected under 35 U.S.C §112 2nd paragraph as being indefinite, and under 35 U.S.C §103, as being unpatentable over Bay, U.S. Patent #5347452 in view of Lupien, U.S. Patent #5101353.

In reply, Claims 1-2 & 21 are currently amended, and Claims 8-20 have been canceled. Claims 3 & 5-7 are previously presented, while Claim 4 is presented as originally submitted. Claims 1-7 & 21 are therefore currently pending.

Response to Arguments

Applicant's arguments filed 08/03/2006 have been fully considered. In addition, the Examiner has considered arguments brought out in two telephonic interviews, conducted over April 25-26, 2006, with Applicant's counsel, Jay Millman, Registration #52520, of Bereskin & Parr. With regard to the rejections under §112, Applicant's amendments to the Claims are sufficient to overcome

the rejections, and they are hereby withdrawn. With regard to the rejections under §103, Applicant's arguments differentiating Bay with the instant invention are persuasive, and the rejections are hereby withdrawn.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in telephone interviews, conducted on 09/25/2006 and 9/27/2006, with Neil Henderson, Registration #47359, of Bereskin & Parr. The application will be amended as detailed immediately below.

Claim 1.   A computer implemented method for identifying aberrant behavior of a financial instrument comprising:

(a)   providing a computer;

(b)   retrieving from a source of market data, closing price, volume and number of transactions conducted for the financial instrument in a selected trading session;

(c)   recording in memory accessible by the computer, the closing price, volume and number of transactions conducted for the financial instrument in the selected trading session;

(d)   identifying a plurality of time periods of different sizes, each of said time periods terminating with the trading session of the financial instrument immediately preceding the selected trading session;

(e)   obtaining and providing in memory accessible by the computer, the average and standard deviation of the closing price, volume and number of transactions during each of the time periods;

(f)   determining whether the closing price, differs from the average of the corresponding component during each of the time periods by a selected number

of standard deviations and for each case in which such a difference is sufficiently large, recording an associated aberrant flag;

(g)   determining whether the volume and number of transactions are each greater than the average of the corresponding component during each of the time periods by a selected number of standard deviations and for each case in which such a difference is sufficiently large, recording an associated aberrant flag;

(h)   counting the number of aberrant flags;

(i)   identifying behavior of the financial instrument as aberrant, or not aberrant, based on the total number of aberrant flags counted; and

(j)   creating a report indicating the aberrancy, or lack thereof, of the financial instrument

Claim 2.   A method as claimed in claim 1, wherein prior to step (j), the step

of identifying behavior of the financial instrument as aberrant, or not aberrant, comprises:

(1)   selecting a threshold value corresponding to an expected total number of aberrant flags;

(2)   calculating the difference between the total number of aberrant flags and the threshold value; and

(3)   identifying the financial instrument as overall aberrant if the magnitude of the difference in step 2 is sufficiently large.

Claim 7.   A method as claimed in claim 1, wherein prior to step (j), the step

of identifying behavior of the financial instrument as aberrant, or not aberrant, comprises:

(1)   repeating steps (b) thru (h) over a selected number of trading sessions prior to the selected trading session, and calculating the average number of aberrant flags for the financial instrument over the selected number of sessions;

(2)   comparing the number of aberrant flags counted in the selected trading session with the average number of aberrant flags calculated in step (1); and

(3)   identifying the behavior of a financial instrument as aberrant if the comparison in step (2) results in a difference above a threshold value.

Claim 21.   A computer implemented method for identifying aberrant behavior

of a financial instrument comprising:

(a)   providing a computer;

(b)   retrieving from a source of market data, the values of a plurality of parameters, the parameters including the number of transactions, the closing price and the volume, for the financial instrument in a selected trading session;

(c)   recording in memory accessible by the computer, the values of the parameters; .

(d)   identifying a plurality of time periods of different sizes, each of said time with the trading session of the financial instrument immediately preceding the selected trading session;

(e)   obtaining and providing in memory accessible by the computer averages and standard deviations of the parameters for each time period;

(f)   providing in memory accessible by the computer actual variations between the values of the parameters during the selected trading session and the average values of the parameters over each time period;

(g)   selecting a set of expected variations for the values of the parameters over each time period, wherein the expected variations are selected depending on the averages and standard deviations of the parameters;

(h)   identifying actual variations in the parameters that exceed the expected variations as aberrant;

(i)   counting the total number of aberrants for the selected trading session;

(j)   selecting a threshold value corresponding to an expected total number of aberrants for the selected trading session;

(k)   providing in memory accessible by the computer the difference between the total number of aberrants for the selected trading session and the threshold value; and

(l)   creating a report indicating whether an overall financial instrument aberration exists, or does not exist, depending on the magnitude of the difference in step (k).

Allowable Subject Matter

Claims 1-7 & 21 are allowed.

Reasons for Allowance

The closest prior art of record is the Bay reference, cited above. Bay

teaches measuring volume of a current trading day (i.e., Tuesday, May 02, 2006)

or trading interval (8-9 AM, Tuesday, May 02, 2006), and compares it with an

average volume of several measurements of volume of the SAME day or interval (i.e., the average volume of the preceding 10 Tuesdays or the average volume of the preceding 10 Tuesdays from 8-9 AM). The results are displayed in bar graph format, so differences can be seen.

In contrast, the instant Application calculates the average volume, average closing price, and average number of transactions (parameters) for a plurality of time periods leading up to the current trading session. Then for each of the time periods, a determination is made for each parameter of the current trading session, as to whether the parameter is within a pre-determined number of standard deviations from the calculated average of the parameter over the trading period. If it is not, the parameter is flagged as aberrant as compared to that time period. The behavior of the entire instrument is recorded as aberrant if the total number of flags for all the parameters over all the time periods is greater than a pre-determined expected number of flags. Bay does not teach these features as claimed by Applicant.

Thus, with regard to Claim 1, Bay, alone or in combination, neither discloses nor fairly suggests the limitations, in a method for identifying aberrant behavior of a financial instrument, comprising:

identifying a plurality of time periods of different sizes, each of said time periods terminating with the trading session of a financial instrument immediately preceding a selected trading session;

obtaining and providing in memory accessible by a computer, the average and standard deviation of the closing price, volume and number of transactions during each of the time periods;

determining whether the closing price, differs from the average of the corresponding component during each of the time periods by a selected number of standard deviations and for each case in which such a difference is sufficiently large, recording an associated aberrant flag.

Claims 2-7, which are dependent on Claim 1, are allowable for the same reasons.

With regard to Claim 21, Bay, alone or in combination, neither discloses nor fairly suggests the limitations, in a method for identifying aberrant behavior of a financial instrument, comprising:

identifying a plurality of time periods of different sizes, each of said time with the trading session of the financial instrument immediately preceding the selected trading session;

obtaining and providing in memory accessible by the computer averages and standard deviations of the parameters for each time period;

providing in memory accessible by the computer actual variations between the values of the parameters during the selected trading session and the average values of the parameters over each time period;

selecting a set of expected variations for the values of the parameters over each time period, wherein the expected variations are selected depending on the averages and standard deviations of the parameters;

identifying actual variations in the parameters that exceed the expected variations as aberrant;

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Alpert whose telephone number is (571) 272-6738. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Trammell James can be reached on (571) 272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James M. Alpert
September 28, 2006

JAGDISH N. PATEL
PRIMARY EXAMINER